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ABSTRACT

Review of recent literature on action research finds that action research has certain overall characteristics. It is a scaled down version of quasi-experimental studies, and it is highly quantitative in its nature of inquiry. Of nine recognized research designs (Isaac and Michael), action research is frequently the most statistically demanding form. This paper examines the views of researchers found in 13 texts on research, 10 recent action studies, 37 ERIC-listed documents from 1996, and 67 ERIC-listed documents from 1997 (as well as another 3,314 works indexed in ERIC from 1996). The first section of the paper examines textbook definitions of what ought to exist in action studies, summarizing the theoretical basis for action studies according to the textbooks. The second section discusses techniques that are currently used in action research. The third section describes the ERIC database search. The fourth section discusses the validity of the literature review. The fifth section contrasts action research with other types of basic research. The paper concludes that qualitative research and action research are two separate entities with separate goals and methodologies and that both have their place in research. (Contains 24 references). (SM)

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ED 414 255

What Action Research Is: A Review of the Literature

Thirteen texts on research, ten recent action studies, 37 ERIC-listed documents from 1996, and 67 ERIC-listed documents from 1997 were consulted to arrive at a definition of action research. In addition to the above works which were carefully studied, another 3, 314 works indexed in ERIC from 1996 were screened. This combination of sources was engaged to give both a theoretical orientation (what the profession expects) and a practical one (what the profession actually does). The following characteristics emerged:

1. Action research is a scaled-down version of quasi-experimental studies. It is highly quantitative, not qualitative, in its nature of inquiry, using a sample that might be found conveniently. External validity is not a great issue since it is understood that the problem being addressed is a local one such as in a district, on one campus, or in one or a few classrooms.

2. Action research is not a qualitative study, case study, naturalistic study, nor an ethnographic form of research. Action research and qualitative/ethnographic/case/naturalistic research are almost mutually exclusive. Quantitative techniques within the action study paradigm are sometimes used to study quality issues, but this does not make the methodology qualitative.

3. Of nine recognized research designs, action research is frequently the most statistically demanding form of research. This happens because of the need to correct computationally for factors that could not logistically be controlled in the field. One textbook author intimates that action research should not be attempted by anyone whose statistical prowess is any less than to a working knowledge of Analysis of COVAriance (ANCOVA). Twelve other volumes appear to reflect that conclusion.

Textbook definitions: What "ought" to exist in action studies

One textbook on educational research says that action research is "a tool of curriculum development used for the study of local problems to guide, correct, and evaluate education decision and actions. It may include research procedures as defined for our study" (Hopkins and Antes, 1990, p. 453). On page 30 the authors go on to say:

> One technique of curriculum development, action research, uses a model of great interest to several disciplines. It is a well-structured model consisting of continuous feedback channeled to attack specific problems in one particular school setting. Because the intent is not to produce generalizable knowledge and the orientation is to only one setting, this type of procedure is a tool of the curriculum specialist, not the researcher. However, within the total model of action research is a part that utilizes research strategies. Specific subparts of the major question can be directed as questions to be answered by research when present knowledge is inadequate. (pp. 30-31)

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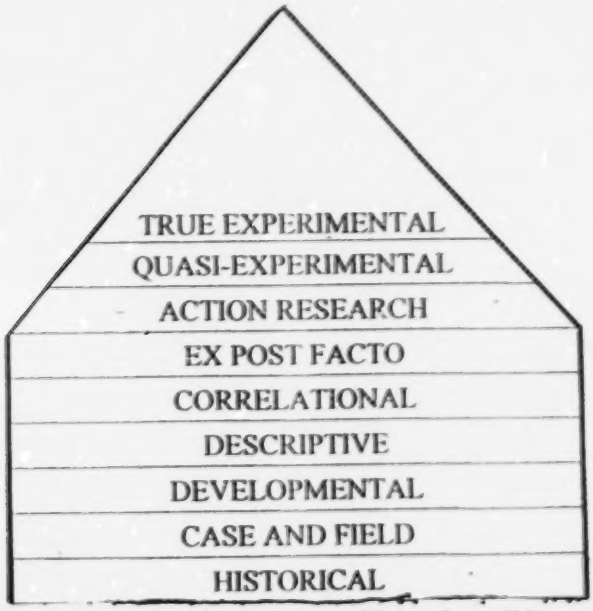
Action research is one that has a treatment (Borg, 1987). It attempts to establish cause and effect, but on a very local scale (p. 284). It is important to describe treatments very clearly and to insure that the treatments given to groups is administered consistently. He says that an action study could be done on only one subject (p. 291), without using hypothesis-testing statistical methodology. The action study he uses (pp. 296-304) as an example includes a 2 x 2 x 3 factorial ANalysis Of VAriance (ANOVA) design and an N of 28 students.

If the nine basic methods of research (Isaac and Michael, 1987, pp. 42-43) are conceptualized as a research house (see Figure One below), action research is the seventh floor of that house. It falls logically below a quasi-experimental study since it does not sample from a large geographic area but above the level of causal-comparative or *ex post facto* studies since the experimenter does control the administration of a treatment.

Figure 1

A conceptualization of Isaac and Michael's Nine Basic Methods of Research (1987)



A brief digression is begged at this point to address the validity issue about the above model. The literature was consulted to determine whether the nine types of research depicted above were actually carried out in the recent literature. Each of the above terms plus "study" plus "1996" was entered as a search term to see if all nine kinds of studies had occurred and were reported in ERIC in the most recent complete year. There was a least representation of all nine kinds, as shown in Table 1:

Table 1

Frequencies of each of Isaac and Michael's Nine Categories of Studies as Catalogued by ERIC in 1996

Category/search terms	Number Published
Historical *and* study *and* 1996	243
Case *and* study *and* 1996	1286
Developmental *and* study *and* 1996	457
Descriptive *and* study *and* 1996	506
Correlational *and* study *and* 1996	223
Ex Post Facto *and* study *and* 1996	2
Action *and* study *and* 1996	431
Quasi-experimental *and* study *and* 1996	7
Experimental *and* study *and* 1996	159
Total studies screened	3, 314

The Isaac and Michael conceptualization of nine research models or paradigms, then, appeared to have taxonomic value because every category was represented. When *ex post facto* was also pursued as "causal-comparative," there were no returns out of the 1996 collection of ERIC papers.

When studies published in 1997 were screened using the same methodology, the same trends were present. But the numbers were fewer because the screening was done in June, before the year was completed. Of note from that screening: there were 36 action-plus-study-plus-1997 entries, but only 2 qualitative-plus-study-plus-1997 entries, and no naturalistic-plus-study-plus 1997 and no ethnographic-plus-study-plus-1997 entries. None of the 1997 action studies were

cross-listed with the ethnographic or the naturalistic studies or qualitative studies. So it again appears that Isaac and Michael's model has some validity as a taxonomic organizer for types of studies. This also shows that action research is a distinctive and separate kind of research, separate and apart from the other eight paradigms for research. Now, back to the textbook authors on research methodology:

Best and Kahn (1989) state that

> Action research is focused on immediate application, not on the development of theory on general application. It has placed its emphasis on a problem here and now in a local setting. Its findings are to be evaluated in terms of local applicability, not universal validity. Its purpose is to improve school practices and, at the same time, to improve those to try to improve the practices: to combine the research processes, habits of thinking, ability to work harmoniously with others, and professional spirit.
>
> If most classroom teachers are to be involved in research activity, it will probably be in the area of action research . . . Action research, which may fail to attain the rigorous qualities of fundamental and applied research [defined as research that leads to the development of theory in a scientific sense on page 25], attempts to apply the spirit of scientific method to the solution of problems in a particular setting, without any assumptions about the general applications of findings beyond the situation studied (pp. 21, 25)

Borg details the methodology of pre-post designs with nonequivalent groups (action studies). He suggests pretesting the groups using a test such as the Mann Whitney Utest or the T-test. If the groups are not significantly different on the dependent variable on the pretest, then the same statistical procedure could be used on the post test. If the groups are different on the dependent variable before the treatment is administered, then ANCOVA will have to be used (p. 288). Borg (1987) says that ANCOVA "is a rather complex procedure, and if you carry out an action research project that requires ANCOVA, you should seek help in doing your analysis" (p. 289).

Charles (1988)) differed from the above authors in that he recommended a experimental approach and did not discuss quasi-experimental or an action study using those words. He suggested selecting two or more groups that are fairly evenly matched on the dependent variable. He would randomly assign groups (not individuals) to treatment and control conditions (p. 126) and then pretest, using ANOVA or chi square to check for equivalence on the dependent variable. Then the treatment phase would begin, followed by post-test data collection and analysis with chi square or ANOVA, assuming that there were no significant differences on the pretest.

Salkind (1991) does not use the term "action research" as he discusses quasi-

experimental research, his description of one option under "quasi-experimental" research matches the research design other authors use for action research. After mentioning problems in controlling for several factors, he suggests the use of ANCOVA to solve arithmetically some of the factors that could not otherwise be controlled. He says that ANCOVA is "an especially useful technique in quasi-experimental or causal-comparative designs when you cannot easily randomly assign people to groups, but you have information concerning variables that are related to the final outcome and on which people do differ" (p. 268). "Analysis of covariance, on its simplest level, subtracts the strength of the relationship between the covariate . . . from the dependent variable (P. 268). Salkind, like Borg, deals with case studies in a separate chapter from experimental ones.

Wiersma (1986) also catalogs action research as a variety of quasi-experimental research in his volume. He spends several pages describing the use of ANCOVA to adjust for "quasi-experimental" studies in which "a researcher, especially one who works in a school setting, often must take intact groups such as classes for research studies. Analysis of covariance may be used to make adjustments, although it should be noted that analysis of covariance does not make the groups equivalent" (p. 354). Wiersma's description of a sample study (pp. 355-356) closely approximates Isaac and Michael's definition of an action study.

Isaac and Michael (1987) say that the purpose of action research is "To develop new skills or new approaches and to solve problems with direct application to the classroom or working world setting" (p. 55). They use the following examples of action studies:

> An inservice training program to help train counselors to work more effectively with minority group children;
> to develop an exploratory program in accident prevention in a driver's education course;
> to solve the problem of apathy in a required high school "orientation" class;
> to test a fresh approach to interesting more students in taking vocational education courses (p. 55)

They mention the following characteristics of action research:

> 1. Practical and directly relevant to an actual situation in the working world. The subjects are the classroom students, the staff, or others with whom you are primarily involved.
>
> 2. Provides an orderly framework for problem-solving and new developments that is superior to the impressionistic, fragmentary approach that otherwise typifies developments in education. It also is empirical in the sense that it relies on actual observations and behavioral data, and does not fall back on subjective committee "studies" or opinions of people based on their past experience.

> 3. Flexible and adaptive, allowing changes during the trial period and sacrificing control in favor of responsiveness and on -the-spot experimentation and innovation.
>
> 4. While attempting to be systematic, action research lacks scientific rigor because its internal and external validity is weak. Its objective is situational, its sample is restricted and unrepresentative, and it has little control over independent variables. Hence, its findings, while useful with the practical dimensions of the situation, do not directly contribute to the general body of educational knowledge. (p. 55)

Of the kind of subjects usually enlisted in an action study, Isaac and Michael say that pupils available in the class of the teacher or teachers doing the research are used as subjects. They say that in formulating the hypothesis for testing "action hypotheses should approach the rigor of formal research" (p. 56) This kind of sample is sometimes called convenience sampling (Bieger & Gerlach, 1996)

It is characteristic of action studies that since intact classes or groups are likely to be drawn, adjustments will have to be made to equalize the groups on the dependent variable so that changes after the treatment can be ascribed to the effects of the treatment. Wampold (1990) says that "It is important to realize that the subjects are measured on the covariable **before** the treatment is administered, so as to void what is called treatment/covariable confounding" (p. 344, emphasis his). Ttests and ANOVAs can be used to accomplish this on the pretest so a decision can be made before the treatment is administered and before post-test data are collected about whether to use ANCOVA.

Sprinthall, Schmute, and Sirois (1991) speak of action research as having the flexibility to entertain creative and new ideas. Of action research they say

> The action researcher may use any approach (or combination of approaches) that is presumed to solve a practical problem. The research is often somewhat informally conducted, and not much attention is paid to controlling the surrounding circumstances. Since this is the case, internal validity is, at least, poor even when an IV [Independent Variable] is manipulated and, of course, is nonexistent in research without an manipulated IV. Measurement is also frequently informal and may involve questionnaires or surveys constructed by the research workers themselves. The subjects used are rarely randomly selected but are instead students who happen to be available or staff members in the school or district who volunteer. Further, comparison groups are usually lacking, making it sometimes difficult to know how much of an effect a given treatment has really had. (p. 99)

Fraenkel and Wallen's approach is easily identifiable as the most conservative of all of these writings on research. They never use the term "action research" nor do they admit that such a thing exists. Their chapter on experimental research includes several designs that might be used as action research within the practical confines of actual school surroundings (table 12.1 of page 252; discussion on pages 242-243; discussion of ANCOVA on page 186). Being conservative in their philosophy about any kind of research that might lead to a cause and effect decision about any group of learners, Fraenkel and Wallen (1990) urge randomization of subjects into treatment and control groups if all possible to solve threats of internal validity.

There appears to be considerable consistency between authors about the nature of action research. MacMillan (1996) says of action research that

> Its purpose is to solve a specific classroom or school problem, improve practice, or make a decision at a single local site. The goal is to improve practice immediately within one or a few classrooms or schools. Teachers and administrators conduct action research. Thus, the studies are conducted by practitioners, focusing on their problems or questions, using the principles and methodologies or research. According to Calhoun (1994), there are three different types of action research: individual teacher research, collaborative action research, and schoolwide action research. The notion of "teacher as researcher" or "Teacher-researcher" has been used to describe studies that have been designed and carried out by the teacher to improve his or her practice. Administrators have used action research strategies for school renewal and other improvement efforts. . . For example, if you are a teacher and want to see if a new way of assigning spelling homework results in higher test scores, you may want to design a study to investigate your new type of assignment (p. 12)

MacMillan's arrangement of "Major Types of Educational Research" shows some similarities to Isaac and Michael (1987) and further highlights the cause-and-effect nature of action research. He (p. 15) points out that action research is "To improve practice in a school or classroom" and that an example of action research is to "Determine which grouping procedure results in the highest achievement for all students." Clearly, the cause-and-effect expectation for action-research, analyzable in quantifiable ways, is alive and well in 1997.

Summary of the theoretical basis for action studies. Figure two shows how action research has appear to have been conceptualized by 13 textbooks on educational research:

Figure 2

Characteristics of action research--theoretical

Author(s)	Qualitative or quantitative	Sampling	Assignment to groups	Statistics	Hypothesis testing?
Weirsma 1986)	quantitative	nonrandom[1]	nonrandom	ANCOVA[2]	Yes
Borg (1987)	quantitative	nonrandom	nonrandom	ANCOVA	Yes
Isaac & Michael (1987)	quantitative	nonrandom	nonrandom	ANCOVA	Usually
Charles (1988)	quantitative	nonrandom	random by cluster	Chi square, ANOVA	Yes
van Dalen(1989)	quantitative	nonrandom	nonrandom	ANCOVA	Yes
Borg & Gall, 1989	quantitative	nonrandom	nonrandom	ANCOVA	Yes
Best & Kahn, 1989	quantitative	nonrandom	nonrandom	ANCOVA	Yes
Sprinthall, Schmutte, & Sirois (1991)	quantitative	nonrandom	nonrandom	not discussed	not discussed
Hopkins & Antes (1990)	quantitative	nonrandom	nonrandom	Ttests, ANOVAs, ANCOVA	Yes
Fraenkel & Wallen, 1990	quantitative	nonrandom	nonrandom	ANCOVA	Yes
Salkind (1991)	quantitative	nonrandom	nonrandom	ANCOVA	Yes
MacMillan (1996)	quantitative	nonrandom	nonrandom	not specific	Yes

Bieger & Gerlach, 1996	quantitative	nonrandom	nonrandom	Ttests, ANOVAs, ANCOVA implied (p. 61)	Yes

[1]Nonrandom selection is also called a sample of convenience by Bieger and Gerlach. It is not good professional practice for theory-building studies such as true experimental or quasi-experimental studies, but is very common to action studies, designed to solve local problems.

[2] This denotes the highest level of statistics or inferential technique recommended either specifically for action studies or mentioned in the text as a way to deal with nonrandomly chosen, possibly non-equivalent groups. Where ANCOVA is indicated, any of the other statistics beneath it in the learning hierarchy such as Ttests or ANOVAs may be also be used for describing a group of learners or for determining analyzing pretest results.

What have these 21 authors shown about the nature of action studies? Action studies have a distinct place among nine recognized types of research. Action studies are empirical in nature and seek to establish cause and effect relationships between variables on a local level. Action studies, unlike any of the other eight, do not attempt to make a new theory or confirm an old one; they exist to solve problems on a local level. Thus freed from some of the theoretical expectations about cause and effect studies, action studies offer freedom to try new ideas. They deliver us from the perpetual loop of researching what has already been half-way researched by someone else. In the effort to solve local problems, specialized statistical techniques are sometimes utilized to mathematically gain the control that was not physically or logistically possible in conducting the study.

Practice: What techniques are being used currently in action research?

Action studies are not difficult to find. The studies summarized below in Figure Three were obtained in less than fifteen minutes in the periodical section of a university library. Criteria for the studies being included in the summary below, following the guidelines of the literature already surveyed, were that (1) the studies had quantitative features, whether they included qualitative commentary or not, (2) the studies attempted to establish or discover a cause and effect relationship between variables, (3) the studies did not attempt to generalize to represent anything larger than a local context. What was left to vary, then, were the techniques utilized to accomplish this (Figure 3).

Figure 3

Characteristics of ten action studies from a university library

Author(s)	Quant. or Qualitative?	Type of sampling	Assignment to groups	Level of Statistics	Hypothesis testing?
Stahl & Pagnucco, 1996	Quant with qual comments	convenience/ N=95	nonrandom	reliability for QRI; independent T for hypothesis testing	Yes
Lampe (1996)	Quant with a few qual comments	convenience/ N=105	nonrandom	quoted r for reliability; two-way ANCOVA	Yes
Olszewski-Kubilius (1996)	Quant with a few qual comments	convenience/ N=58	nonrandom	ANOVA, Ttests, Chi square; reliability mentioned in text but not reported	Yes
Cheng & Steffenson (1996)	quant to test hypo., many qualitative comments	convenience/ N=46	nonrandom, intact classes	Ttests; no mention of reliability	Yes
MacArthur, Graham, Haynes, & DeLaPaz (1996) (Two studies within one publication)	heavily quantitative	convenience Study 1, N=55; Study 2, N=27	intact classes	correlation, regression	Yes

Webb, Troper, and Fall (1996)	Qualitative and quantitative	convenience, N=166	intact classes	multilinear regression; partial correlation	Yes
Kopp & Ferguson, 1996	quantitative	convenience, N=14	randomly drawn from a convenience sample	Ttests, "one-shot" post test design	Yes
Griffin, Malone, & Kameenui (1995)	quantitative with many qualitative comments	convenience/ N=99	5 intact classes and 2 "homogeneo usly grouped" classes	reliability; MANOVA	Yes
Kastner, Gottlieb, Gottlieb, & Kastner (1996)	quantitative with some qualitative comments	convenience/ N=93	intact classes	reliability, 1 way ANOVA, chi-square	Yes

What can be observed from the work of these 22 authors? Because they were selected on the above criteria, it is not surprising that their studies addressed local problems or that they were empirical in nature. What can be learned is that they made their action studies as controlled as possible. Without doing that, cause and effect, even at a local level, cannot be established.

Search Three: ERIC

The ERIC database was searched on-line to locate documents on both action research and qualitative/ethnographic/case/naturalistic research. The titles, descriptors, and abstracts of all documents indexed and published in ERIC in 1996 were reviewed. There were four from 1996 that had the terms "action" and "naturalistic" and 1996. Three of those had both words in the title or descriptors or abstract fields, but none were studies--they just happened to have those word combinations. The fourth was a study originally published in *Action in Teacher Education* (which triggered the "hit"), but the article did not claim to be an action study. When "action" and "qualitative" and "1996" were input, there were 24 hits. Five were from Australia, New Zealand, Thailand, Finland, and The Netherlands, which are not necessarily the present arena, but even at that, none of those claimed to be "action studies." Most had the word "action" somewhere in the text or descriptors but did not indicate that they were "qualitative action studies." Only one of the 24 made any claim to be an action study using qualitative data. When "action" and ethnographic" and "1996" were input, there were 9 matches. One called

itself an ethnographic and action and a case study. It appeared to be mostly a descriptive case study. Several were ethnographic studies on affirmative action, triggering "hits." One ethnographic study was about "punitive action." Only the first made any claim to being both ethnographic and action.

Validity of the Review of Literature

It might be argued that the first data source, the textbook review, was biased to agree with the viewpoint of the authors. Even if it was, the works cited represent a view of action research that is of long standing and is recognized by many. The fact that several of these texts are in their fifth and sixth editions is testimony to the veracity and character of the authors' advice to the profession.

It might also be argued that the second data source, the review of the studies, was biased because the studies were selected upon the conglomerate definition of action research by the aforementioned authors. The purpose of the study review was as much to establish the procedures and instrumentation of such studies as to prove the unique existence of the entity called "action research."

There could be little dismissing of the findings of the third data source. All studies indexed under ERIC were included in the review, and the procedures utilized are clearly replicable. It is evident that action research and case/ethnographic/naturalistic/qualitative research are mutually exclusive categories.

While the definition of action research may appear to have been buried alive by the use of the literature at this point, there is another force out there that needs to be recognized. There is a **social** movement to make action research very qualitative. It shows up as papers presented in meetings (Sparapani et. al., 1996), in ERIC Digest (Johnson, 1993), and in Phi Delta Kappa Fastbacks (Perry-Sheldon, 1987). This leaves some of us looking for a place to stand since qualitative and quantitative presently exist as almost mutually exclusive categories if not totally so.

There may be those who wish that action research was qualitative or naturalistic, *sans* statistics, but the preceding data do not indicate that this is presently a reality among our profession. When the profession wishes to investigate even a local issue, if it is very interested in it, it does it with as much research design vigor and as much quantitative measurement as it possibly can under the circumstances. Policy may change someday, but as recently as today, it has not yet done so yet.

Contrasts with other types of basic research: A return to the literature

Action studies are not historical studies. They are not ethnographical, naturalistic, qualitative, or case studies. Of ethnographic study the authors of our present research text

(Hopkins & Antes, 1990) say that it is "A scaled-down version of anthropological study of a socio-cultural situation. This study uses techniques of anthropology to study an educationally based question" (p. 456). Their description of ethnographic studies is in the chapter on descriptive research (10), not in the chapter on experimental studies where a treatment is administered and causal relationships are explored (12). Ethnographic studies are also equated with "naturalistic observation, simulation, observation, case studies, content analysis, participant observation, and field study" (p. 269). They say that in qualitative research "Usually large amounts of data are collected over long periods of time" and they say within the same context (p. 270) "Efforts should be made to build quantification into research procedures . . . Objective conclusions are supported by quantification, and qualitative studies may develop more valid principles if narrative results are supplemented by quantification whenever possible" (p. 270).

Case/qualitative/naturalistic/ethnographic studies are on the second level of the research house. They are described (1991) as descriptive research by Sprinthall, Schmutte, and Sirois:

A fundamental distinction is made between *qualitative research* and *quantitiative research*. Although the basic difference is in the nature of the data-gathering techniques and the actual data gathered, there are several philosophical and procedural differences between them. Most of the methods we have described are considered quantitative methods because they are used to gather numerical data. Qualitative methods, on the other hand, are approaches used to systematically gather data, but the data are purely *descriptive* and therefore not numerical. (p. 100, italics theirs.)

And of some of the problems associated with qualitative research they say:

> There are other differences between the qualitative and quantitative approaches. One important difference is that the reliability of qualitative data is more difficult to establish and may of course be affected by the biases of the researcher-observer-interviewer. Even when it is established it is usually lower than the reliability of quantitative measures. (pp. 101-102)

Finally in speaking of the qualitative-quantitative philosophical difference Sprinthall, Schmutte, and Sirois (1991) reflect

> Further, quantitative research hypotheses are often deduced from theory, and the research designed to lead to knowledge of *facts and causes*. On the other hand, qualitative descriptions may lead to general statements or theories designed to *understand* phenomena.
>
> An *ethnography* is a qualitative study in which the researcher provides for the reader a pure or "true-to-life" description of the observations made during the research. It includes as accurate a representation as possible of the things that people say, write, and do in their own environments. The study typically contains

little or no interpretation on the part of the researcher. (p. 102)

In a recent work, McMillan (1996) places qualitative research in the same chapter (10) with historical research. Conceptually in light of the Isaac and Michael model this is a the bottom of the research house, not third from the top. He says that "ethnography refers to an in-depth analytical description of naturally occurring behavior within a culture. Anthropologists engage in ethnographic research. In fact, some researchers define ethnography as anthropological field study" (p. 239).

When Wiersma (1986) discusses ethnographic research (chapter 9) his discussion is a totally separate chapter from experimental designs (chapter 6). He notes the imprecise nature of qualitative methodology (p. 256) in the use of terms such as *large, a long time*, or *quite rapid* in the descriptions frequently elicited in such research.

Immediately following Sprinthall, Schmute, and Sirois' description of experimental methods (including action studies), they begin the section on Qualititative Research with "A fundamental distinction is made between Qualitative research and quantitative research. . . [speaking of qualitative studies] the data are, then, the interviewer's written notes or the tape recording. The result is a nonstatistical written description that helps us to understand what changes professors have perceived in students over the past twenty years" (Pp. 100-101). They point out that qualitative data are filtered through the perceptions of the researchers and may possess unquantifiable reliability problems.

Fraenkel and Wallen (1990) spoke of qualitative research in a surprisingly optimistic way, given their conservative stance on experimental research (chapter 12). Qualitative research is a useful technique if what is desired is to obtain an extremely detailed description of a setting, a group of people, or a problem. They put it well within the constructivist thinking (p. 368). They set qualitative research into a descriptive light, far removed from cause and effect studies, but do point out its usefulness as a descriptive technique.

In summation, then, qualitative research, with all of its sub-descriptors, has its own place for existing. So does action research. They are two different entities with separate goals and methodologies. Action research is not presently, on any widespread scale, being done (at least not published) using qualitative methodology. We should set our course accordingly if what we are promulgating is to be called action research.

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